PATRICK PIRIM

Application No.: 09/763,713

Page 4

Con el

in the running direction, of the said central position (60), the successive frames thus restored.

Com o C

23. (Amended) The apparatus of claim 10, further comprising a runlength coder downstream of the motion analysis stage.

## **REMARKS**

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5008.

Respectfully submitted,

Gerald T. Gray Reg. No. 41,797

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8<sup>th</sup> Floor San Francisco, California 94111-3834 Tel: (925) 472-5008

Tel: (925) 472-5008 Fax: (415) 576-0300 GTG:ikh

GTG:jkh wc 9039842 v1 PATRICK PIRIM Application No.: 09/763,713

Page 5

## **VERSION WITH MARKINGS TO SHOW CHANGES MADE**

## In the Claims

Amend claims 3, 4, 6, 9 and 23 as follows:

- 3. (Amended) A process according to claim 1 [or 2], characterised in that the said preliminary decoding operation causes the said signals to circulate over a loop with a travel duration equal to the duration of a frame of this signals, causes the said signals, during its travel over the said loop, to pass through a pixel position matrix the number of whose rows, on the one hand, and the number of whose columns, on the other, is at least equal to 2n+1, while designating by n the number of levels quantifying the displacement amplitude, whereby the said signals is injected into the said loop at a central position of the said matrix, in bringing back, after running the said first frame of each sequence, within the said central position, a pixel of the said signals, while moving inside the said matrix, which has moved between the frame involved and the previous frame, in relation to the correction bits packet regarding the said pixel. In order thus to restore the successive frames of the sequences as they were before encoding in the encoding operation, and extracts from the said loop, in a position located downstream, in the running direction, of the said central position, the successive frames thus restored.
- 4. (Amended) A process according to [any one of the claims 1 to 3] claim 1, characterised in that the said packet of correction digital signals comprises for each pixel four groups of signals:
- the first consists of a single binary signals whereby one of both possible values of which represents a global modification of the pictures between a frame and the previous frame and the other value a global non-modification, said first one signalling the necessity of global correction or the non-necessity of such a correction,

**PATENT** 

PATRICK PIRIM

Application No.: 09/763,713

Page 6

the second consists of a single binary signals whereby one of both
possible values of which represents a displacement for the pixel and the other value a
non-displacement, said second one, and,

- both other two consist of digital signals with a limited number of bits and represent, one the quantified amplitude and the other the quantified oriented direction of the displacement if any.
- 6. (Amended) A process according to [any one of the claims 1 to 5] claim 1, characterised in that the said preliminary decoding operation uses in the said loop a square matrix whose odd number of lines and whose number of columns are respectively smaller than the number of lines and the number of columns of a frame of the video signals to be reconstructed, whereas both these numbers are greater, at least by one unit, than the number of quantification levels of the said displacement amplitude, and through which circulate the signals from the said decompression operation, and the position of the pixels having been displaced is restored, whereas they are subject in the said matrix to a reverse direction translation whose quantified amplitude and whose quantified oriented direction are specified by the digital values of said both other groups of signals.
- 9. (Amended) A device according to claim 7 [or 8], characterised it comprises means (203) to cause the said digital signal encoded at the input to circulate over a loop (50-51-52), whose travel duration needed by the said signal is equal to the duration of a frame of this signal, means to cause the said signal, during its travel over the said loop, to pass through a pixel position matrix (50) the number of whose rows, on the one hand, and the number of whose columns, on the other, is at least equal to 2n+1, while designating by n the number of levels quantifying the displacement amplitude, whereby the said signal is injected into the said loop at a central position (60) of the said matrix (50), means (70) to bring back, after running the said first frame of each sequence, within the said central position (60) a pixel of the said signal, while moving inside the said matrix, which has moved between the frame involved and the previous frame, in relation

**PATENT** 

PATRICK PIRIM

Application No.: 09/763,713 Page 7

to the packet of correction bits regarding the said pixel, in order thus to restore the successive frames of the sequences as they were before encoding in the encoding operation, and means to extract from the said loop, in a position (35) located downstream, in the running direction, of the said central position (60), the successive frames thus restored.

23. (Amended) The apparatus of claim 10 [or 22], further comprising a run-length coder downstream of the motion analysis stage.

WC 9039842 v1